

1 ttgcaggctg ctgggctggg gctaagggct gctcagtttc cttcagcggg gcactgggaa
 61 gcgccatggc actgcagggc atctcggteg tggagctgtc cggcctggcc ccggggcccg
 121 tctgtgctat ggtcctggct gacttcgggg cgcgtgtggt acgcgtggac cggcccggct
 181 cccgctacga cgtgagccgc ttggggccggg gcaagcgctc gctagtgtg gacctgaagc
 241 agccgcgggg agccgccgtg ctgcggcgtc tgtgcaagcg gtcggatgtg ctgctggagc
 301 ccttccgccg cgggtgtcatg gagaaactcc agctggggcc agagattctg cagcgggaaa
 361 atccaaggct tatttatgcc aggctgagtg gatttggcca gtcaggaagc ttctgccggg
 421 tagctggcca cgatatcaac tatttggctt tgtcaggtgt tctctcaaaa attggcagaa
 481 gtggtgagaa tccgtatgcc ccgctgaatc tcctggctga ctttgctggg ggtggcctta
 541 tgtgtgact gggcattata atggctcttt ttgaccgcac acgactggc aagggtcagg
 601 tcattgatgc aaatatggtg gaaggaacag catatttaag ttcttttctg tggaaaactc
 661 agaaatcgag tctgtgggaa gcacctcgag gacagaacat gttggatggg ggagcacctt
 721 tctatacgac ttacaggaca gcagatgggg aattcatggc tgttgagca atagaacccc
 781 agttctacga gctgctgatc aaaggacttg gactaaagtc tgatgaactt cccaatcaga
 841 tgagcatgga tgattggcca gaaatgaaga agaagtttgc agatgtattt gcaaagaaga
 901 cgaaggcaga gtggtgtcaa atctttgacg gcacagatgc ctgtgtgact ccggttctga
 961 cttttgagga ggttggtcat catgatcaca acaaggaacg gggctcgttt atcaccagt
 1021 aggagcagga cgtgagcccc cgccctgcac ctctgctgtt aaacacccca gccatccctt
 1081 ctttcaaaag ggatcccttc ataggagaac aactgagga gatacttgaa gaatttggat
 1141 tcagccgga agagatttat cagcttaact cagataaaat cattgaaagt aataaggtaa
 1201 aagctagtct ctaacttcca ggcccacggc tcaagtgaat ttgaatactg catttacagt
 1261 gtagagtaac acataacatt gtatgcatgg aaacatggag gaacagtatt acagtgtcct
 1321 accactctaa tcaagaaaag aattacagac tctgattcta cagtgatgat tgaattctaa
 1381 aaatggttat cattagggct tttgatttat aaaactttgg gtacttatac taaattatgg
 1441 tagttattct gccttcaggt ttgcttgata tatttgttga tattaagatt cttgacttat
 1501 attttgaatg ggttctagtg aaaaaggaat gatataattt tgaagacatc gatatacatt
 1561 tatttacact cttgattcta caatgtagaa aatgaggaaa tgccacaaat tgtatggtga
 1621 taaaagtcac gtgaaacaga gtgattgggt gcatccaggc cttttgtctt ggtgttcag
 1681 atctccctct aagcacattc caaactttag caacagttat cacactttgt aatttgcaaa
 1741 gaaaagtttc acctgtattg aatcagaatg ctttcaactg aaaaaaacat atccaaaata
 1801 atgaggaaat gtgttggtc actacgtaga gtccagaggg acagtcagtt ttaggggtgc
 1861 ctgtatccag taactcgggg cctgtttccc cgtgggtctc tgggctgtca gctttccttt
 1921 ctccatgtgt ttgatttctc ctcaggctgg tagcaagttc tggatcttat acccaacaca
 1981 cagcaacatc cagaaataaa gttct

FIGURE 1

MALQGISVVELSGLAPGPF CAMVLADFGARVVRVDRPGSRYDVSRLGRGKRSLVLDLKQPRGA AVLRR LCK
RSDVLLPFRRGVMEKLQLGPEILQRENPR LIYARLSGFGQSGSFCRLAGHDINYLALSGVLSKIGRSGEN
PYAPLNLLADFAGGGLMCALGIIMALFDRTRTGKGQVIDANMVEGTAYLSSFLWKTQKSSLWEAPRGQNML
DGGAPFYTTYRTADGEFMAVGAIEPQFYELLIKGLGLKSDEL PNQMSMDDWPEMKKKFADVFAKKTAEWC
QIFDGTDACVTPVLT FEEVVHHDHNKERGSFITSEEQDVSPRPAPLLLNTPAIP SFKRDPFIGEHTEEILE
EFGFSREEIYQLNSDKIIESNKVKASL

FIGURE 2

FIG. 3

SV1 (AMACR Isoform 1; >FMhxm_44226FL01)
 GGGCGCCGGGATTGGGAGGGCTTCTTGCAGGCTGCTGGGCTGGGGCTAAG
 GGCTGCTCAGTTTCCTTCAGCGGGGCACTGGGAAGCGCCATGGCACTGCA
 GGGCATCTCGGTCGTGGAGCTGTCCGGCCTGGCCCCGGGCCCCGTTCTGTG
 CTATGGTCCTGGCTGACTTCGGGGCGCGTGTGGTACGCGTGGACCGGCCC
 GGCTCCCGCTACGACGTGAGCCGCTTGGGCCGGGGCAAGCGCTCGCTAGT
 GCTGGACCTGAAGCAGCCGCGGGGAGCCGCCGTGCTGCGGCGTCTGTGCA
 AGCGGTTCGGATGTGCTGCTGGAGCCCTTCCGCCGCGGTGTCATGGAGAAA
 CTCCAGCTGGGCCCCAGAGATTCTGCAGCGGGAAAATCCAAGGCTTATTTA
 TGCCAGGCTGAGTGGATTTGGCCAGTCAGGAAGCTTCTGCCGGTTAGCTG
 GCCACGATATCAACTATTTGGCTTTGTCAGGTGTTCTCTCAAAAATTGGC
 AGAAGTGGTGAGAATCCGTATGCCCCGCTGAATCTCCTGGCTGACTTTGC
 TGGTGGTGGCCTTATGTGTGCACTGGGCATTATAATGGCTCTTTTTTGACC
 GCACACGCACTGGCAAGGGTCAGGTCATTGATGCAAATATGGTGGAAGGA
 ACAGCATATTTAAGTTCTTTTCTGTGGAAAACCTCAGAAATCGAGTCTGTG
 GGAAGCACCTCGAGGACAGAACATGTTGGATGGTGGAGCACCTTTCTATA
 CGACTTACAGGACAGCAGATGGGGAATTCATGGCTGTTGGAGCAATAGAA
 CCCCAGTTCTACGAGCTGCTGATCAAAGGACTTGGACTAAAGTCTGATGA
 ACTTCCCAATCAGATGAGCATGGATGATTGGCCAGAAATGAAGAAGAAGT
 TTGCAGATGTATTTGCAAAGAAGACGAAGGCAGAGTGGTGTCAAATCTTT
 GACGGCACAGATGCCTGTGTGACTCCGGTTCTGACTTTTGAGGAGGTTGT
 TCATCATGATCACAACAAGGAACGGGGCTCGTTTATCACCAGTGAGGAGC
 AGGACGTGAGCCCCCGCCCTGCACCTCTGCTGTTAAACACCCCAGCCATC
 CCTTCTTTCAAAGGGATCCTTTTCATAGGAGAACACACTGAGGAGATACT
 TGAAGAATTTGGATTCAGCCGCGAAGAGATTTATCAGCTTAACTCAGATA
 AAATCATTGAAAGTAATAAGGTAAAAGCTAGTCTCTAACTTCCAGGCCCA
 CGGCTCAAGTGAATTTGAATACTGCATTTACAGTGTAGAGTAACACATAA
 CATTGTATGCATGGAAACATGGAGGAACAGTATTACAGTGTCTTACCACT
 CTAATCAAGAAAAGAATTACAGACTCTGATTCTACAGTGATGATTGAATT
 CTAAAAATGGTTATCATTAGGGCTTTTGATTTATAAACTTTGGGTACTT
 ATACTAAATTATGGTAGTTATTCTGCCTTCCAGTTTGCTTGATATATTTG
 TTGATATTAAGATTCTTGACTTATATTTTGAATGGGTCTAGTGAAAAAG
 GAATGATATATTCTTGAAGACATCGATATACATTTATTTACACTCTTGAT
 TCTACAATGTAGAAAATGAGGAAATGCCACAAATTGTATGGTGATAAAAG
 TCACGTGAAACAGAGTGATTGGTTGCATCCAGGCCTTTTGTCTTGGTGTT
 CATGATCTCCCTCTAAGCACATTCCAAACTTTAGCAACAGTTATCACACT
 TTGTAATTTGCAAAGAAAAGTTTCACCTGTATTGAATCAGAATGCCTTCA
 ACTGAAAAAAACATATCCAAAATAATGAGGAAATGTGTTGGCTCACTACG
 TAGAGTCCAGAGGGACAGTCAGTTTTAGGGTTGCCTGTATCCAGTAACTC
 GGGGCCTGTTTCCCCGTGGGTCTCTGGGCTGTCAGCTTTCCTTTCTCCAT
 GTGTTTGATTTCTCCTCAGGCTGGTAGCAAGTTCTGGATCTTATACCCAA
 CACACAGCAACATCCAGAAATAAAGATCTCAGGACCCCCCAAAAAAAAAA
 AAAAAAAAAAAAAAAAAA (SEQ ID NO:4)

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FIG. 5A

SV2 (AMACR Isoform 2; >FMhxm_44226FL02

GGGCGCCGGGATTGGGAGGGCTTCTTGCAGGCTGCTGGGCTGGGGCTAAG
GGCTGCTCAGTTTCCTTCAGCGGGGCACTGGGAAGCGCCATGGCACTGCA
GGGCATCTCGGTCGTGGAGCTGTCCGGCCTGGCCCCGGGCCCCGTTCTGTG
CTATGGTCCTGGCTGACTTCGGGGCGCGTGTGGTACGCGTGGACCGGCCC
GGCTCCCGCTACGACGTGAGCCGCTTGGGCCGGGGCAAGCGCTCGCTAGT
GCTGGACCTGAAGCAGCCGCGGGGAGCCGCCGTGCTGCGGCGTCTGTGCA
AGCGGTTCGGATGTGCTGCTGGAGCCCTTCCGCCGCGGTGTCATGGAGAAA
CTCCAGCTGGGCCCAGAGATTCTGCAGCGGGAAAATCCAAGGCTTATTTA
TGCCAGGCTGAGTGGATTTGGCCAGTCAGGAAGCTTCTGCCGGTTAGCTG
GCCACGATATCAACTATTTGGCTTTGTGAGGTGTTCTCTCAAAAATTGGC
AGAAGTGGTGAGAATCCGTATGCCCCGCTGAATCTCCTGGCTGACTTTGC
TGGTGGTGGCCTTATGTGTGCACTGGGCATTATAATGGCTCTTTTTGACC
GCACACGCACTGGCAAGGGTCAGGTCATTGATGCAAATATGGTGGAAGGA
ACAGCATATTTAAGTTCTTTTCTGTGGAAACTCAGAAATCGAGTCTGTG
GGAAGCACCTCGAGGACAGAACATGTTGGATGGTGGAGCACCTTTCTATA
CGACTTACAGGACAGCAGATGGGGAATTCATGGCTGTTGGAGCAATAGAA
CCCCAGTTCTACGAGCTGCTGATCAAAGGACTTGGACTAAAGTCTGATGA
ACTTCCCAATCAGATGAGCATGGATGATTGGCCAGAAATGAAGAAGAAGT
TTGCAGATGTATTTGCAAAGAAGACGAAGGCAGAGTGGTGTCAAATCTTT
GACGGCACAGATGCCTGTGTGACTCCGGTTCTGACTTTTGAGGAGGTTGT
TCATCATGATCACAACAAGGAACGGGGCTCGTTTATCACCAGTGAGGAGC
AGGACGTGAGCCCCCGCCCTGCACCTCTGCTGTTAAACACCCAGCCATC
CCTTCTTTCAAAGGGATCCTTTCATAGGAGAACACACTGAGGAGATACT
TGAAGAATTTGGATTTCAGCCGCGAAGAGATTTATCAGCTTAACTCAGATA
AAATCATTGAAAGTAATAAGGCTGGTAGCAAGTTCTGGATCTTATACCCA
ACACACAGCAACATCCAGAAATAAAGATCTCAGGACCCCCCAGCAAGTCG
TTTTGTGTCTCCTTGGACTGAGTTAAGTTACAAGCCTTTCTTATACCTGT
CTTTGACAAAGAAGACGGGATTGTCTTTACATAAAACCAGCCTGCTCCTG
GAGCTTCCCTGGACTCAACTTCCTAAAGGCATGTGAGGAAGGGGTAGATT
CCACAATCTAATCCGGGTGCCATCAGAGTAGAGGGAGTAGAGAATGGATG
TTGGGTAGGCCATCAATAAGGTCCATTCTGCGCAGTATCTCAACTGCCGT
TCAACAATCGCAAGAGGAAGGTGGAGCAGGTTTCTTCATCTTACAGTTGA
GAAAACAGAGACTCAGAAGGGCTTCTTAGTTTCATGTTTCCCTTAGCGCCT
CAGTGATTTTTTTCATGGTGGCTTAGGCCAAAAGAAATATCTAACCATTCA
ATTTATAAATAATTAGGTCCCCAACGAATTAAATATTATGTCCTACCAAC
TTATTAGCTGCTTGAAAAATATAATACACATAAATAAAAAAATATATTTT
TCATTTCTATTTTATTGTTAATCACAACACTTACTAAGGAGATGTATGC
ACCTATTGGACACTGTGCAACTTCTCACCTGGAATGAGATTGGACACTGC
TGCCCTCATTCTTCTGCTCCATGTTGGTGTCCATATAGTACTTGATTTTTT
ATCAGATGGCCTGGAAAACCCAGTCTCACAAAAATATGAAATTATCAGAA
GGATTATAGTGCAATCTTATGTTGAAAGAATGAACTACCTCACTAGTAGT
TCACGTGATGTCTGACAGATGTTGAGTTTCATTGTGTTTGTGTGTTCAAA
TTTTTAAATATTCTGAGATACTCTTGTGAGGTCACTCTAATGCCCTGGGT
GCCTTGGCACAGTTTTAGAAATACCAGTTGAAAATATTTGCTCAGGAATA
TGCAACTAGGAAGGGGCAGAATCAGAATTTAAGCTTTCATATTCTAGCCT
TCAGTCTTGTTCTTCAACCATTTTTAGGAACTTTCCCATAGGTTATGTT
TTCCAGCCCAGGCATGGAGGATCACTTGAGGCCAAGAGTTCGAGACCAGC
CTGGGGAACTTGGCTGGACCTCCGTTTCTACGAAATAAAAAATAAAAAAT
TATCCAGGTATGGTGGTGTGTGCCTGTAGTCCTATCTACTCAAGGGTGGG

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FIG. 5B

GCAGGAGGATCACTTGAGCCCAGGAATTTGAGGCCACAGTGAATTAGGAT
TGCACCACTGCACTCTAGCCCAGGCAACAGAACAAGAACCTGTCTCTAAA
TAAATAAATAAAAAATAATAATAAAAAAGATGTTTTCCCTACAAAAAA
GACTTTTCATTTGAACTCGGTCCAGCAAGGAAAATATAACCCACTCGAAG
TCTTTAAAACAGAGGAAATTTAATATAAAGAATTCCACTGGTGACGAAAG
AGCAGAGAAGCCCAGAAGATAGTGAGGCAACCCTGATAGGAACATAACTA
GGAAGCCAAGACCACTCCTATGGTTGCAGGGGTGATGGGAAAGCTGGTGT
ACTTGGACCCAGAAGCCAAAGTTGCTGCACCCACCTTGGAGACATAGACA
CTGGCAGTAATACCTCAGGGAGAAGAAAGAAATCTAGGGAAATATCCTGG
CTTCTTTCTTCTCTCTCTCCCTAGTCTTCTTACCAGTGTCTCCCATTA
GCCAAATCTACCTAGAAGCCAGAAAACAAGGGAACCCTGGAAATGTAGCC
CCATAAGATAAAGAGCACCAAAGGAAATAGATCTGAGCAGACAGGCAGCA
CAAAATGCAGTGTGTATGGTTTATTCACTCAGTAATTCCTTTAGCAAATG
TTTATTGAGGATCTACTAGGTGCCAGGTATCATGATACTTGCTGGGGATA
CCATAATGAACAAAACAGACCTGTTCTCCGCTCTTGAGGAAATCAAAGAC
AAACACAGGATATGGAATAAACCAGAAATTATCTCATTGTAAAATGTGTT
AAGTACCACGAGGAGAAATATCAGGGCCATCTGACACAGCTAATGATTTG
AAGAAGGGTGTGACCTGCCACCATTTTAAATCTAGTTATTTCACTCCTGA
GCTGTGTGTGTGGAAAACCTTGTAAGTAAAAAATAGAATGTCTATATTTATA
AAAAGTTTATGAAAAGATATCAATTTATTTACATTTTGACAAACTCTATG
TAATAAGGCTTTATTACTCACGGCCATGTGTGTGATCATGTGTAATAGCA
TGTGTGTATGAGAGAGAGAAGCCATATGTAATTATGTGTAATAACGTCTG
TGAGAGAGAAGCCATGTGTGTGATCATGTAAAATAACGTGTGTGAGAGAA
GCCATGTGTGTGATCGTGTAAAATAACGTGTGTGAGAAGCCGTGTGTGAT
GTGT (SEQ ID NO:6)

0967305-092901

FIG. 6

SV2 (>FMhXm_44226FL02_P1)

MALQGISVVELSGLAPGPFCAMVLADFGARVVRVDRPGSRYDVSRLGRGKRSLVLDLKQP
RGA AVLRRRLCKRSDVLLLEPFRRGVMEKLQLGPEILQRENPRLIYARLSGFGQSGSFCRLA
GHDINYLALSGVLSKIGRSGENPYAPLNLLADFAGGGLMCALGIIMALFDRTRTDKGQVI
DANMVEGTAYLSSFLWKTQKSSLWEAPRGQNMLDGGAPFYTTYRTADGEFMAVGAIEPQF
YELLIKGLGLKSDEL PNQMSMDDWPEMKKKFADVFAKKTAEWCQIFDGTDACVTPVLTF
EEVVHHDHNKERGSFITSEEQDVSPRPAPLLLNTPAIPSFKRDPFIGEHTEEILEEFGFS
REEIYQLNSDKIIESNKAGSKFWILYPHTHSNIQK (SEQ ID NO:7)

09967305-09967305

FIG. 7A

SV3 (AMACR Isoform 3; >FMhxm_44226FL03)

GGGCGCCGGGATTGGGAGGGCTTCTTGCAGGCTGCTGGGCTGGGGCTAAG
GGCTGCTCAGTTTCCTTCAGCGGGGCACTGGGAAGCGCCATGGCACTGCA
GGGCATCTCGGTCTGTGGAGCTGTCCGGCCTGGCCCCGGGCCCCGTTCTGTG
CTATGGTCCTGGCTGACTTCGGGGCGCGTGTGGTACGCGTGGACCGGCCC
GGCTCCCGCTACGACGTGAGCCGCTTGGGCGGGGCAAGCGCTCGCTAGT
GCTGGACCTGAAGCAGCCGCGGGGAGCCGCCGTGCTGCGGCGTCTGTGCA
AGCGGTTCGGATGTGCTGCTGGAGCCCTTCCGCCGCGGTGTCATGGAGAAA
CTCCAGCTGGGCCCAGAGATTCTGCAGCGGGAAAATCCAAGGCTTATTTA
TGCCAGGCTGAGTGGATTTGGCCAGTCAGGAAGCTTCTGCCGGTTAGCTG
GCCACGATATCAACTATTTGGCTTTGTCAGGTGGAAGGAACAGCATATTT
AAGTTCTTTTCTGTGGAAAACCTCAGAAATCGAGTCTGTGGGAAGCACCTC
GAGGACAGAACATGTTGGATGGTGGAGCACCTTTCTATACGACTTACAGG
ACAGCAGATGGGGAATTCATGGCTGTTGGAGCAATAGAACCCAGTTCTA
CGAGCTGCTGATCAAAGGACTTGGACTAAAGTCTGATGAACTTCCCAATC
AGATGAGCATGGATGATTGGCCAGAAATGAAGAAGAAGTTTGCAGATGTA
TTTGCAAAGAAGACGAAGGCAGAGTGGTGTCAAATCTTTGACGGCACAGA
TGCCTGTGTGACTCCGGTTCTGACTTTTGAGGAGGTTGTTTCATCATGATC
ACAACAAGGAACGGGGCTCGTTTATCACCAGTGAGGAGCAGGACGTGAGC
CCCCGCCCTGCACCTCTGCTGTTAAACACCCAGCCATCCCTTCTTTCAA
AAGGGATCCTTTTCATAGGAGAACACACTGAGGAGATACTTGAAGAATTTG
GATTCAGCCGCGAAGAGATTTATCAGCTTAACTCAGATAAAATCATTGAA
AGTAATAAGGTAAAAGCTAGTCTCTAACTTCCAGGCCACGGCTCAAGTG
AATTTGAATACTGCATTTACAGTGTAGAGTAACACATAACATTGTATGCA
TGGAACATGGAGGAACAGTATTACAGTGTCTACCACTCTAATCAAGAA
AAGAATTACAGACTCTGATTCTACAGTGATGATTGAATTCTAAAAATGGT
TATCATTAGGGCTTTTGATTTATAAACTTTGGGTACTTATACTAAATTA
TGGTAGTTATTCTGCCTTCCAGTTTGCTTGATATATTTGTTGATATTAAG
ATTCTTGACTTATATTTTGAATGGGTTCTAGTGAAAAAGGAATGATATAT
TCTTGAAGACATCGATATACATTTATTTACACTCTTGATTCTACAATGTA
GAAAATGAGGAAATGCCACAAATTGTATGGTGATAAAAGTCACGTGAAAC
AGAGTGATTGGTTGCATCCAGGCCTTTTGTCTTGGTGTTCATGATCTCCC
TCTAAGCACATTCCAACTTTAGCAACAGTTATCACACTTTGTAATTTGC
AAAGAAAAGTTTCACCTGTATTGAATCAGAATGCCTTCAACTGAAAAAAA
CATATCCAAAATAATGAGGAAATGTGTTGGCTCACTACGTAGAGTCCAGA
GGGACAGTCAGTTTTAGGGTTGCCTGTATCCAGTAACTCGGGGCCTGTTT
CCCCGTGGGTCTCTGGGCTGTCAGCTTTCCTTTCTCCATGTGTTTGATTT
CTCCTCAGGCTGGTAGCAAGTTCTGGATCTTATACCCAACACACAGCAAC
ATCCAGAAATAAAGATCTCAGGACCCCCCAGCAAGTCGTTTTGTGTCTCC
TTGGACTGAGTTAAGTTACAAGCCTTCTTATACCTGTCTTTGACAAAGA
AGACGGGATTGTCTTTACATAAAACCAGCCTGCTCCTGGAGCTTCCCTGG
ACTCAACTTCCTAAAGGCATGTGAGGAAGGGGTAGATTCCACAATCTAAT
CCGGGTGCCATCAGAGTAGAGGGAGTAGAGAATGGATGTTGGGTAGGCCA
TCAATAAGGTCCATTCTGCGCAGTATCTCAACTGCCGTTCAACAATCGCA
AGAGGAAGGTGGAGCAGGTTTCTTCATCTTACAGTTGAGAAAACAGAGAC
TCAGAAGGGCTTCTTAGTTTCATGTTTCCCTTAGCGCCTCAGTGATTTTTT
CATGGTGGCTTAGGCCAAAAGAAATATCTAACCATTCAATTTATAAATAA
TTAGGTCCCCAACGAATTAAATATTATGTCCTACCAACTTATTAGCTGCT
TGAAAAATATAATACATAAAATAAAAAAATATATTTTTTCATTTCTATTT
CATTGTTAATCACAACTACTTACTAAGGAGATGTATGCACCTATTGGACA

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FIG. 7B

CTGTGCAACTTCTCACCTGGAATGAGATTGGACACTGCTGCCCTCATTTT
CTGCTCCATGTTGGTGTCCATATAGTACTTGATTTTTTATCAGATGGCCT
GGAAAACCCAGTCTCACAAAAATATGAAATTATCAGAAGGATTATAGTGC
AATCTTATGTTGAAAGAATGAACTACCTCACTAGTAGTTCACGTGATGTC
TGACAGATGTTGAGTTTCATTGTGTTTGTGTGTTCAAATTTTTTAAATATT
CTGAGATACTCTTGTGAGGTCACTCTAATGCCCTGGGTGCCTTGGCACAG
TTT TAGAAATACCAGTTGAAAATATTTGCTCAGGAATATGCAACTAGGAA
:GGGGCAGAATCAGAATTTAAGCTTTCATATTCTAGCCTTCAGTCTTGTT
CTTCAACCATTTTTTAGGAACTTTCCCATAGGTTATGTTTTCCAGCCCAG
GCATGGAGGATCACTTGAGGCCAAGAGTTCGAGACCAGCCTGGGGAACTT
GGCTGGACCTCCGTTTCTACGAAATAAAAAATAAAAAAATTATCCAGGAAA
AAAAAAAAAAAAAAAAAAAAAAAA (SEQ ID NO:8)

090703.092901

FIG. 8

SV3 (>FMhxm_44226FL03_P1)

MALQGISVVELSGLAPGPFCAMVLADFGARVVRVDRPGSRYDVSRLGRGKRSLVLDLKQP
RGA AVLRR LCKRSDV LLEPFRRGVMEKLQLGPEILQRENPR LIYARLSGFGQSGSFCRLA
GHDINYLALSGGRNSIFKFFSVENSEIESVGSTSRTEHVGWWSTFLYDLQDSRWGIHGCW
SNRTPVLRAADQRTWTKV (SEQ ID NO:9)

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FIG. 9

SV4 (AMACR Isoform 4; >gi|14725916|ref|XM_043772.1| Homo sapiens alpha-methylacyl-CoA racemase (AMACR), mRNA)

TTGCAGGCTGCTGGGCTGGGGCTAAGGGCTGCTCAGTTTCCTTCAGCGGG
GCACTGGGAAGCGCCATGGCACTGCAGGGCATCTCGGTCGTGGAGCTGTC
CGGCCTGGCCCCGGGCCCCGTTCTGTGCTATGGTCCTGGCTGACTTCGGGG
CGCGTGTGGTACGCGTGGACCGGCCCCGGCTCCCGCTACGACGTGAGCCGC
TTGGGCCCCGGGCAAGCGCTCGCTAGTGCTGGACCTGAAGCAGCCGCGGGG
AGCCGCCGTGCTGCGGCGTCTGTGCAAGCGGTCGGATGTGCTGCTGGAGC
CCTTCCGCCGCGGTGTCATGGAGAACTCCAGCTGGGCCCAGAGATTCTG
CAGCGGGAATAATCCAAGGCTTATTTATGCCAGGCTGAGTGGATTTGGCCA
GTCAGGAAGCTTCTGCCGGTTAGCTGGCCACGATATCAACTATTTGGCTT
TGTCAGGTGTTCTCTCAAAAATTGGCAGAAGTGGTGAGAATCCGTATGCC
CCGCTGAATCTCCTGGCTGACTTTGCTGGTGGTGGCCTTATGTGTGCACT
GGGCATTATAATGGCTCTTTTTTGACCGCACACGCACTGGCAAGGGTCAGG
TCATTGATGCAAATATGGTGGAAGGAACAGCATATTTAAGTTCTTTTCTG
TGGAATACTCAGAAATCGAGTCTGTGGGAAGCACCTCGAGGACAGAACAT
GTTGGATGGTGGAGCACCTTTCTATACGACTTACAGGACAGCAGATGGGG
AATTCATGGCTGTTGGAGCAATAGAACCCCAAGTTCTACGAGCTGCTGATC
AAAGGACTTGGACTAAAGTCTGATGAACTTCCCAATCAGATGAGCATGGA
TGATTGGCCAGAAATGAAGAAGAAGTTTGCAGATGTATTTGCAAAGAAGA
CGAAGGCAGAGTGGTGTCAAATCTTTGACGGCACAGATGCCTGTGTGACT
CCGTTCTGACTTTTGAGGAGGTTGTTTCATCATGATCACAACAAGGAACG
GGGCTCGTTTATCACCAGTGAGGAGCAGGACGTGAGCCCCCGCCCTGCAC
CTCTGCTGTAAACACCCCAGCCATCCCTTCTTTCAAAAGGGATCCTTTC
ATAGGAGAACACACTGAGGAGATACTTGAAGAATTTGGATTTCAGCCGCGA
AGAGATTTATCAGCTTAACTCAGATAAAATCATTGAAAGTAATAAGGTAA
AAGCTAGTCTCTAACTTCCAGGCCACCGGCTCAAGTGAATTTGAATACTG
CATTTACAGTGTAGAGTAACACATAACATTGTATGCATGGAAACATGGAG
GAACAGTATTACAGTGTCTTACCCTCTAATCAAGAAAAGAATTACAGAC
TCTGATTCTACAGTGATGATTGAATTCTAAAAATGGTTATCATTAGGGCT
TTTGATTTATAAACTTTGGGTACTTATACTAAATTATGGTAGTTATTCT
GCCTTCCAGTTTGCTTGATATATTTGTTGATATTAAGATTCTTGACTTAT
ATTTTGAATGGGTTCTAGTGAAAAAGGAATGATATATTCTTGAAGACATC
GATATACATTTATTTACACTCTTGATTCTACAATGTAGAAAATGAGGAAA
TGCCACAAATTGTATGGTGATAAAAGTCACGTGAAACAGAGTGATTGGTT
GCATCCAGGCCTTTTGTCTTGGTGTTCATGATCTCCCTCTAAGCACATTC
CAAACCTTTAGCAACAGTTATCACACTTTGTAATTTGCAAAGAAAAGTTTC
ACCTGTATTGAATCAGAATGCCTTCAACTGAAAAAACATATCCAAAATA
ATGAGGAAATGTGTTGGCTCACTACGTAGAGTCCAGAGGGACAGTCAGTT
TTAGGGTTGCCTGTATCCAGTAACTCGGGGCTGTTTCCCCGTGGGTCTC
TGGGCTGTCAGCTTTCCTTTCTCCATGTGTTTGATTTCTCCTCAGGCTGG
TAGCAAGTTCTGGATCTTATACCCAACACACAGCAACATCCAGAAATAAA
GATCT (SEQ ID NO:10)

09957306 "09957306" 09957306

FIG. 10

SV3 (>gi|14725917|ref|XP_043772.1| alpha-methylacyl-CoA
racemase [Homo sapiens])

MALQGISVVELSGLAPGPF CAMVLADFGARVVRVDRPGSRYDVSRLGRGKRSLVLDLKQP
RGA AVLRRRLCKRSDVLLLEPFRRGVMEKLQLGPEILQRENPRLIYARLSGFGQSGSFCRLA
GHDINYLALSGVLSKIGRSGENPYAPLNLLADFAGGGLMCALGIIMALFDRTTRTGKGQVI
DANMVEGTAYLSSFLWKTQKSSLWEAPRGQNMLDGGAPFYTTYRTADGEFMAVGAIEPQF
YELLIKGLGLKSDELPNQMSMDDWPEMKKKFADVFAKKTAEWCQIFDGTDACVTPVLT
EEVVHHDHNKERGSFITSEEQDVSPRPAPLLLNTPAIPSFKRDPFIGEHTEEILEEFGFS
REEIYQLNSDKIIESNKVKASL (SEQ ID NO:11)

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108260-50279660

- | | |
|----------------------------|-------------------------|
| 1) normal prostate | 7) normal colon |
| 2) prostate adenocarcinoma | 8) colon adenocarcinoma |
| 3) prostate adenocarcinoma | 9) liver met (colon) |
| 4) lymph node met (prost) | 10) normal liver |
| 5) liver met (prost) | 11) normal kidney |
| 6) liver met (prost) | 12) normal kidney |
| | 13) normal brain |
| | 14) normal muscle |
| | 15) normal muscle |

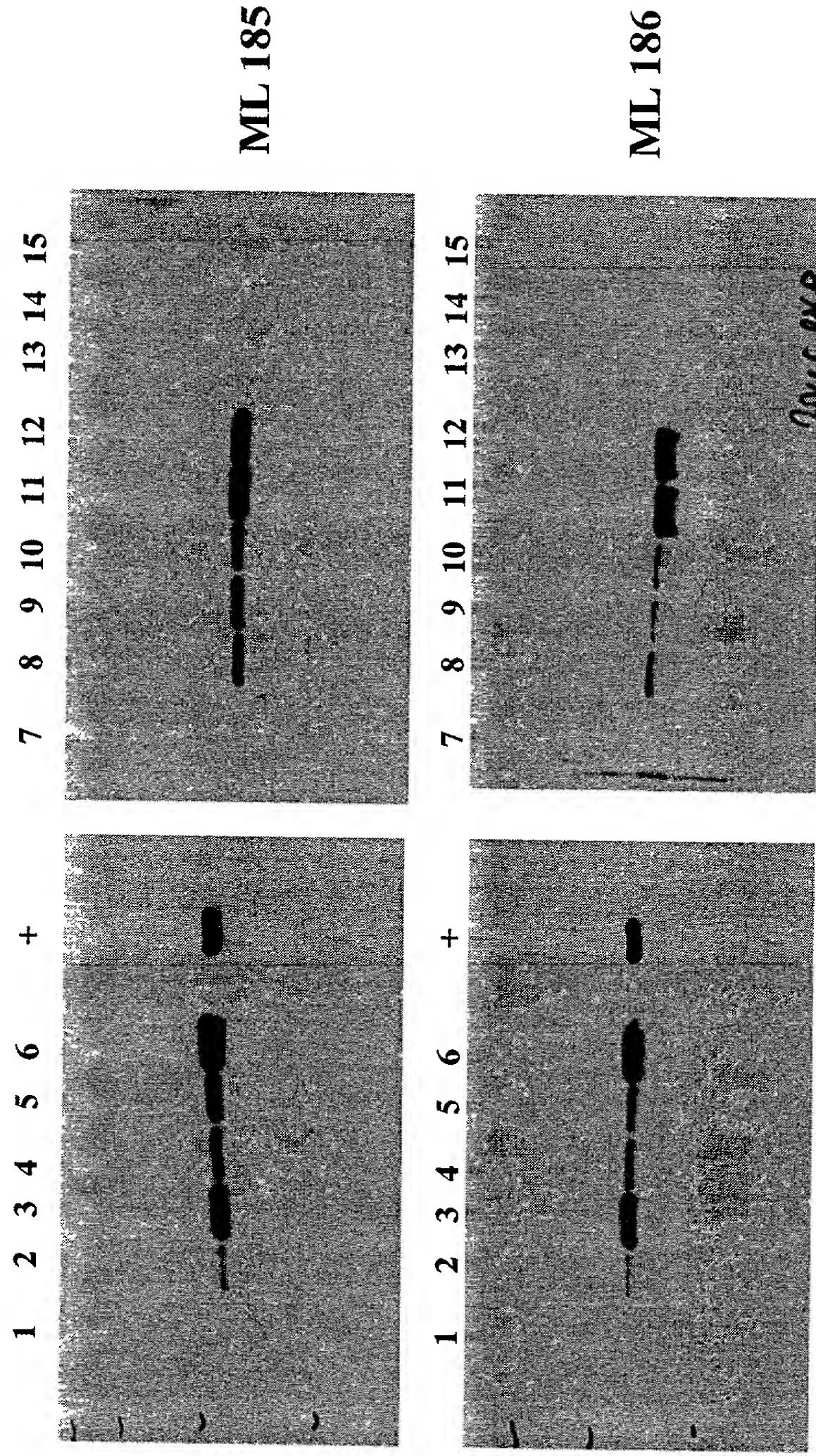


FIG. 11

FIG. 12

Racemace splice variants identified by sequencing of IMAGE clones

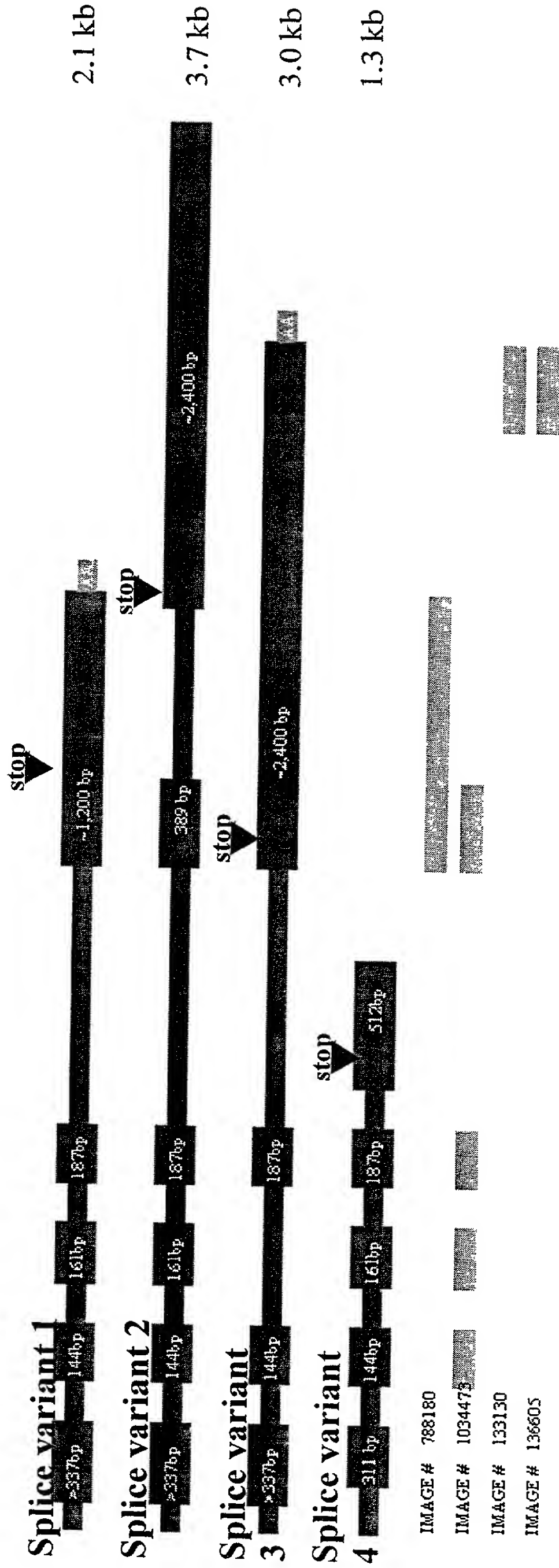
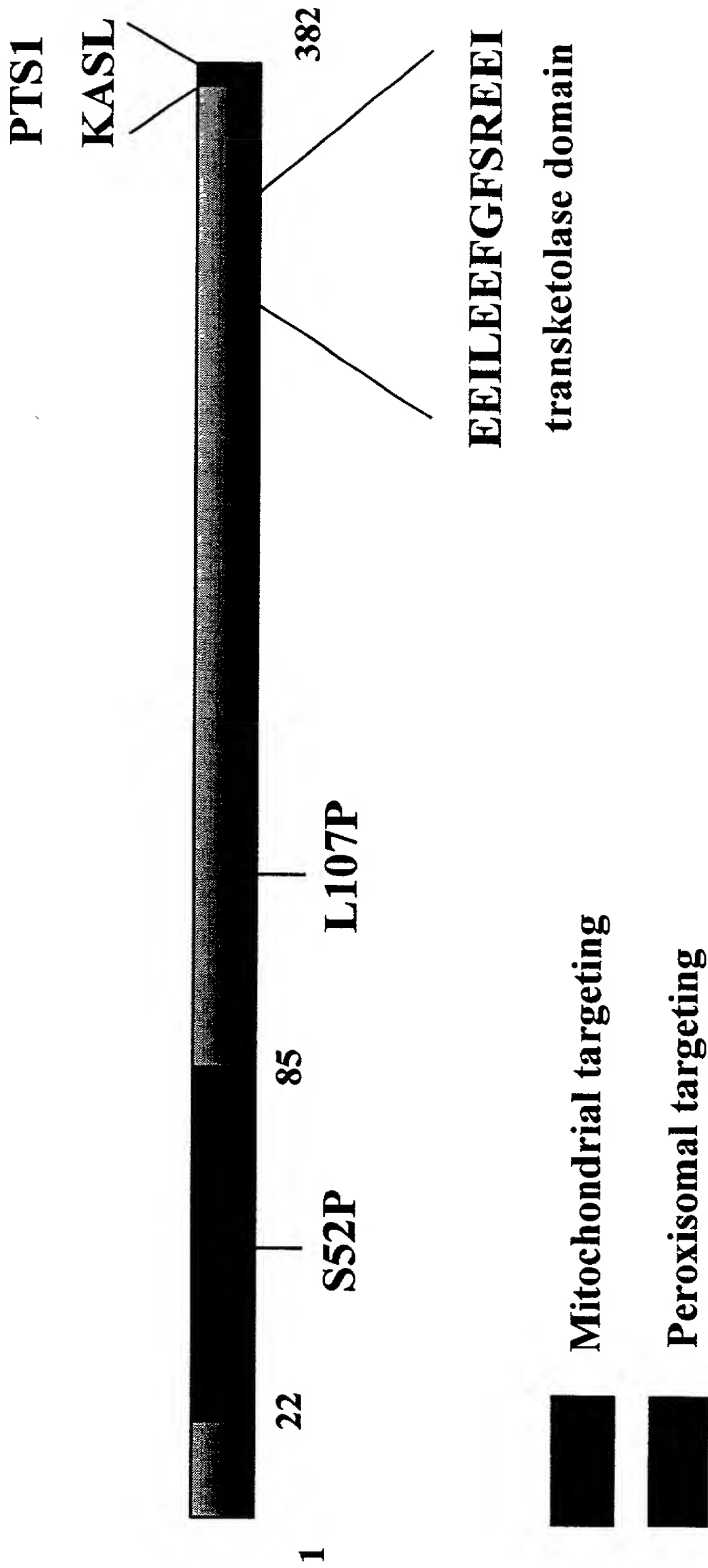


FIG. 13



103250" 50729660

IMAGE clone 136605

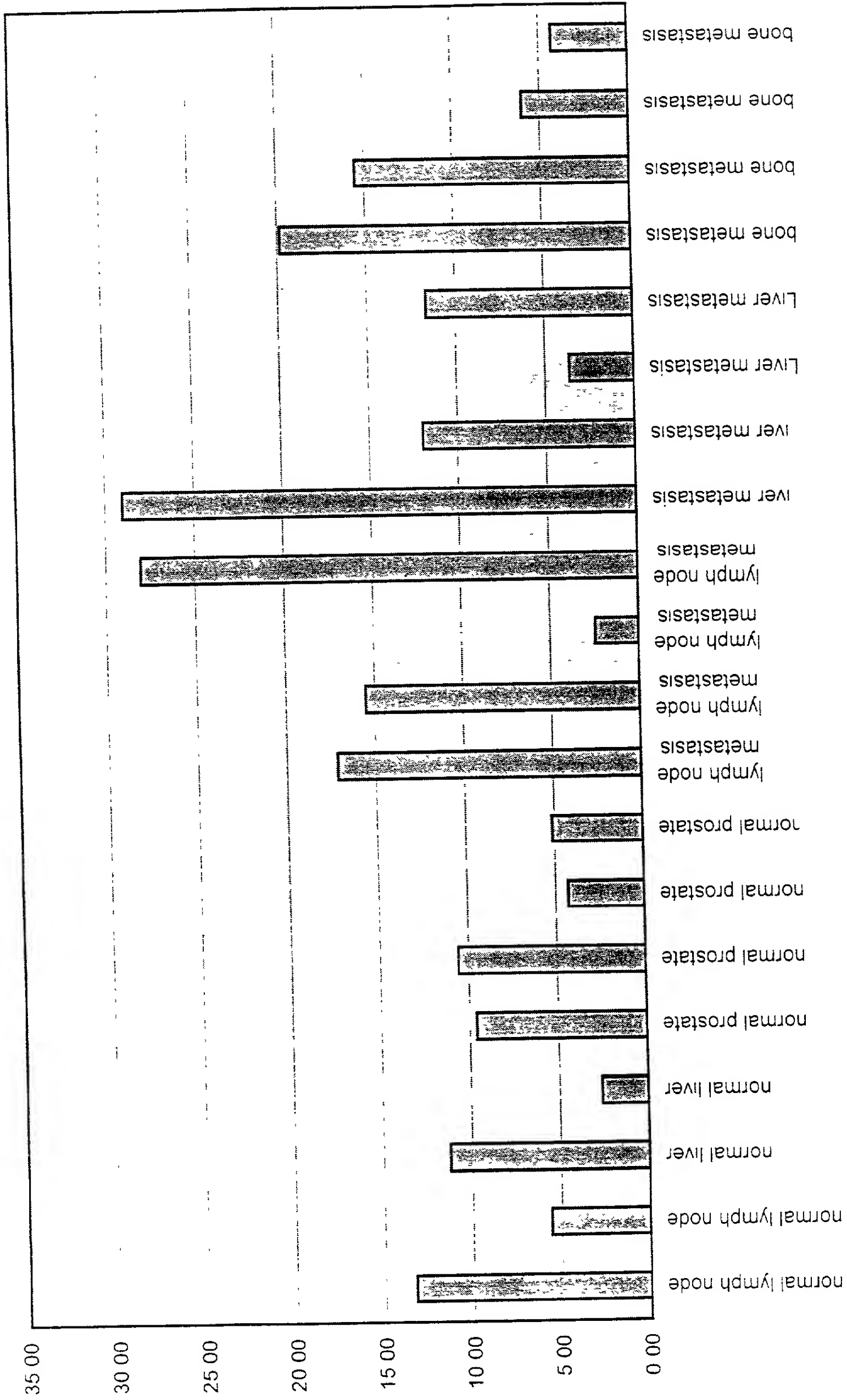


FIG. 14A

FIG. 14B

IMAGE clone 133130

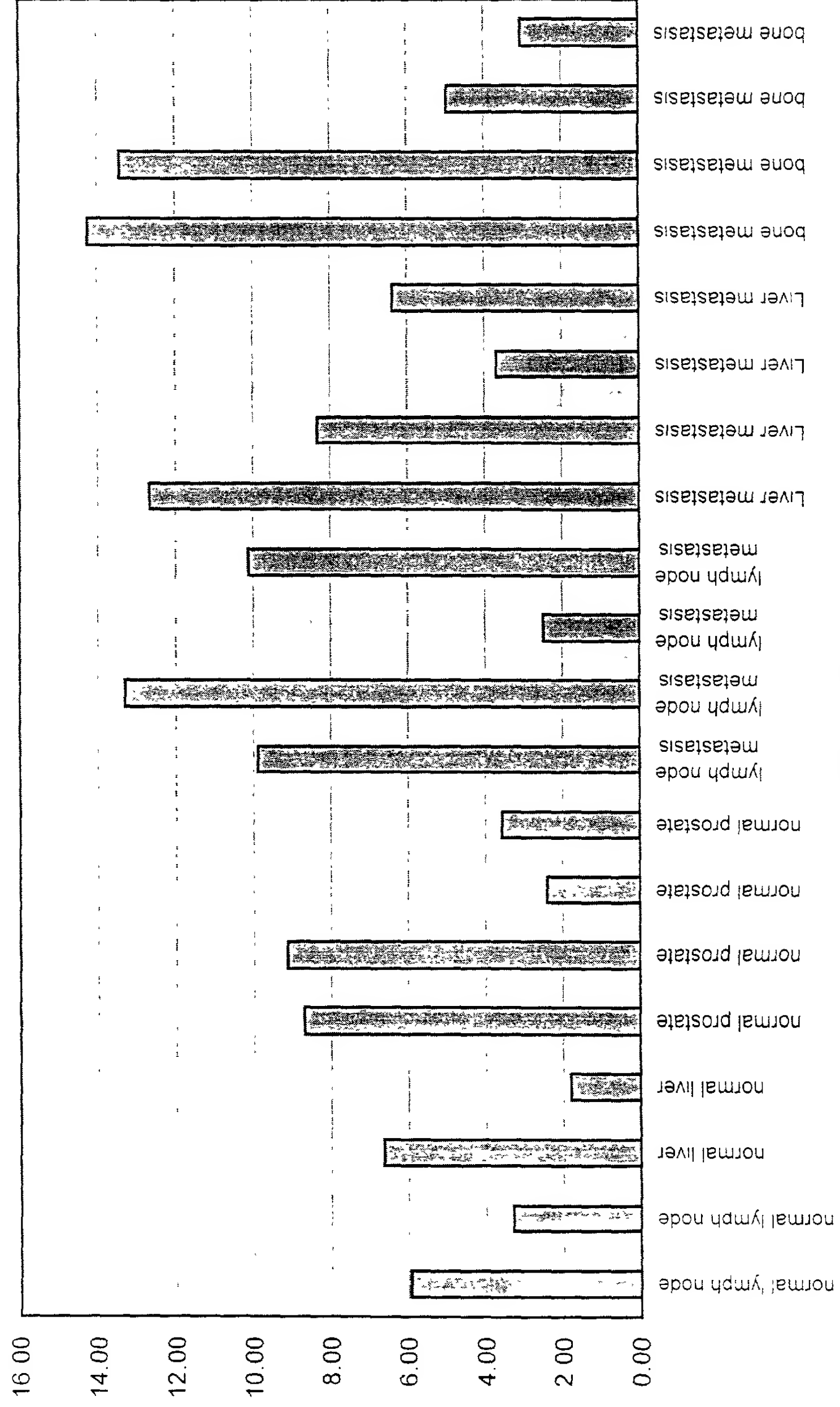


FIG. 14B

IMAGE clone 1034473: MID=44226 alpha-methylacyl-CoA racemase

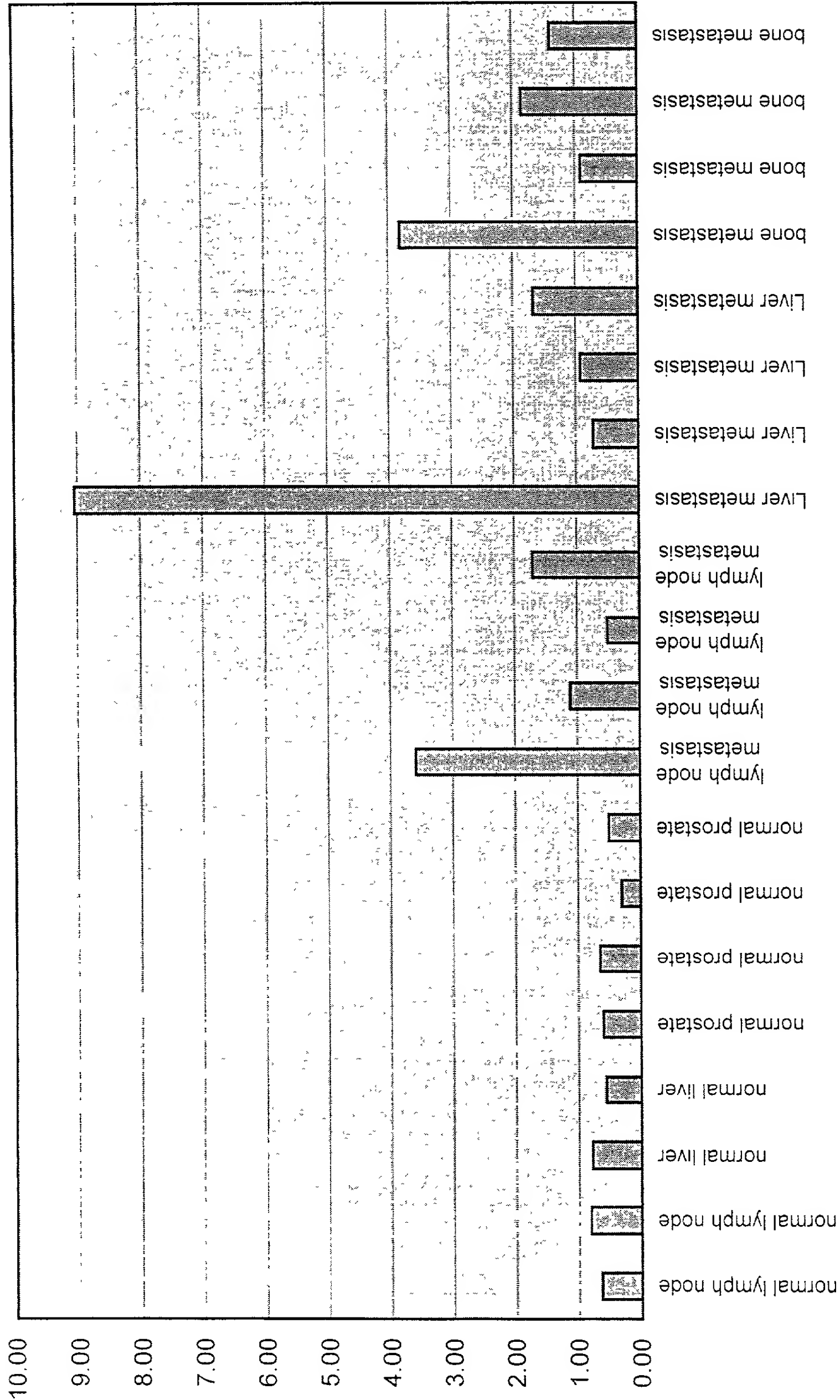


FIG. 14C

IMAGE clone 788180: MID=44226 alpha-methylacyl-CoA racemase

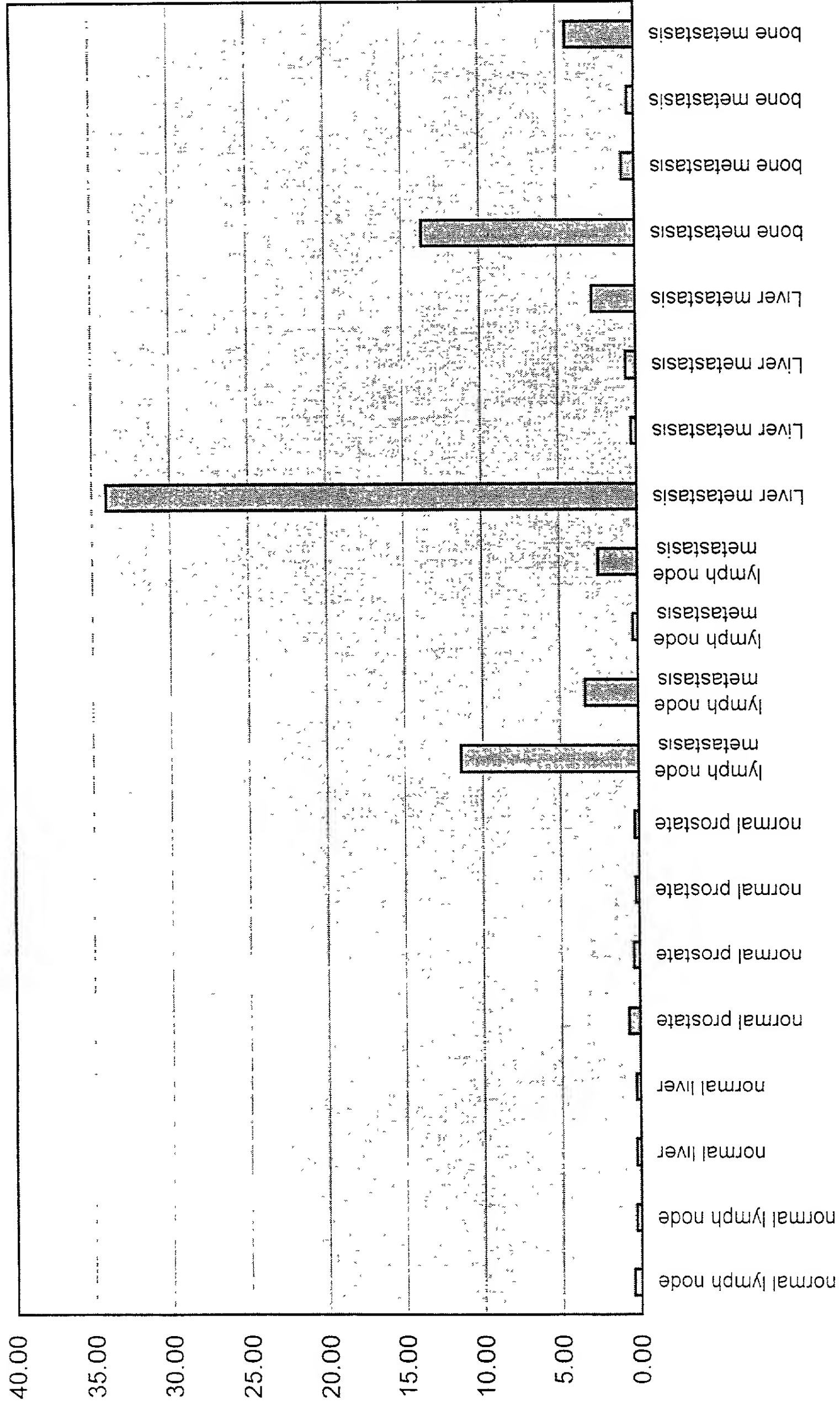


FIG. 14D